ABSTRACT OF THE DISCLOSURE

An approach for establishing secure multicast communication among multiple

multicast proxy service nodes is disclosed. The multicast proxy service nodes, which

can be distributed throughout an enterprise domain, are organized in a logical tree that

5   mimics the logical tree arrangement of domains in a directory server system. The

attributes of the multicast proxy service nodes include the group session key and the

private keys of the multicast proxy service nodes that are members of the multicast or

broadcast groups. The private keys provide unique identification values for the

multicast proxy service nodes, thereby facilitating distribution of such keys. Because

10   keys as well as key version information are housed in the directory, multicast security

can be achieved over any number of network domains across the entire enterprise.

Key information is stored in, and the logical tree is supported by, a directory service.

Replication of the directory accomplishes distribution of keys. Multicast proxy

service nodes may obtain current key information from a local copy of the replicated

15   directory.

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